



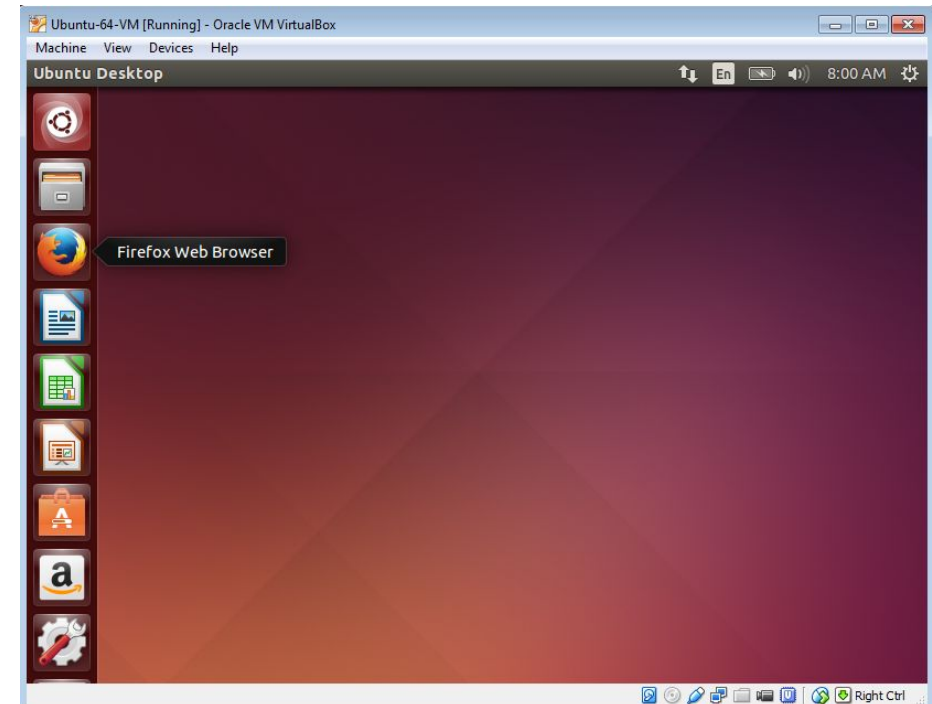
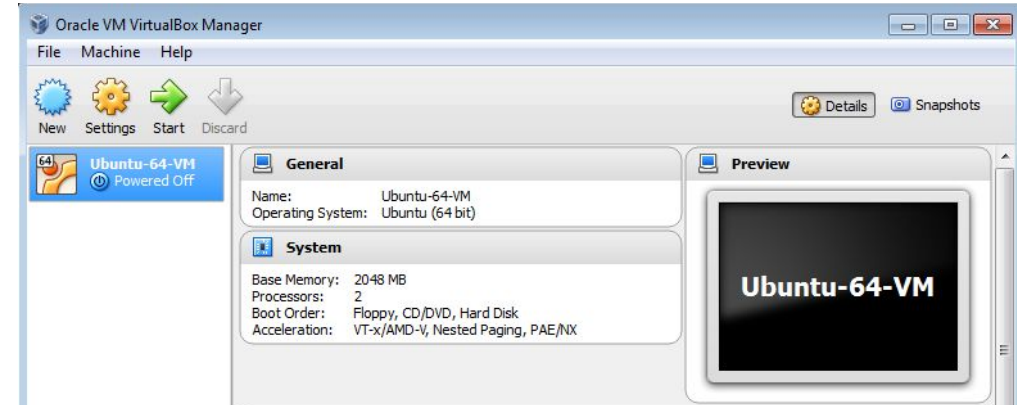
Getting Ready Setup

Material for this tutorial

- Utils
 - VirtualBox
- Tutorial VirtualBox image
 - Khronos OpenVX 'Sample' implementation: functional OpenVX implementation
 - Open source OpenVX implementation
 - Source code for the different steps
 - Tutorial Videos
 - OpenVX 1.0.1 specification (pdf)
 - IDE: qtcreator
- OpenVX spec in HTML: www.khronos.org/registry/vx/specs/1.0.1/html

Setup: Booting Ubuntu

- Uncompress Ubuntu-64-OpenVX.zip
- Install & run VirtualBox
- Add & run the VM image
 - Machine -> Add -> Ubuntu-64-OpenVX.vbox
 - Click 'Start'
- *Some useful commands*
 - *Tab* *auto-complete a command*
 - *Ctrl-Alt-T* *: Open a terminal*
 - *ll* *: list files*
 - *cd <dir>* *: enter directory*
 - *cd ..* *: parent directory*
 - *gedit <file>* *: editor*
 - *evince <file>.pdf* *: pdf viewer*



Setup: Directory Structure

Khronos Sample Implementation

```
openvx@openvx-VirtualBox:~$ ll
total 1492
drwxrwxr-x  4 openvx openvx  4096 Mar 26 11:30 Archived/
drwxr-xr-x  2 openvx openvx  4096 Mar 26 11:20 Desktop/
drwx----- 2 openvx openvx  4096 Jan 11 21:29 Documents/
drwxr-xr-x  2 openvx openvx  4096 Mar 26 11:29 Downloads/
drwxrwxr-x 16 openvx openvx  4096 Mar 26 09:26 openvx_sample/
-rw-rw-r--  1 openvx openvx 1156845 Jun  5  2015 OpenVX_Specification_1_0_1.pdf
drwxrwxr-x  7 openvx openvx  4096 Mar 27 12:54 openvx_tutorial/
-rw-----  1 openvx openvx 339361 Mar 26 10:57 openvx_tutorial_README.pdf
drwxrwxr-x  7 openvx openvx  4096 Jan 11 19:31 qtcreator-3.6.0/
openvx@openvx-VirtualBox:~$
```

OpenVX specification

Tutorial source code

```
openvx@openvx-VirtualBox:~/openvx_tutorial$ ll
total 28
-rw-r--r--  1 openvx openvx  1082 Mar 15 23:00 LICENSE
-rw-r--r--  1 openvx openvx 11161 Mar 27 19:58 README.md
drwxr-xr-x  2 openvx openvx  4096 Mar 16 22:05 scripts/
drwxr-xr-x 12 openvx openvx  4096 Mar 27 20:06 tutorial_exercises/
drwxr-xr-x  2 openvx openvx  4096 Mar 16 22:06 tutorial_videos/
```

Tutorial video example

```
openvx@openvx-VirtualBox:~/openvx_tutorial/tutorial_exercises$ ll
total 48
drwxr-xr-x  4 openvx openvx  4096 Mar 16 17:30 amdovx-core/
-rw-r--r--  1 openvx openvx  4175 Mar 27 19:26 CMakeLists.txt
drwxr-xr-x  2 openvx openvx  4096 Mar 27 19:13 exercise1/
drwxr-xr-x  2 openvx openvx  4096 Mar 23 22:06 exercise2/
drwxr-xr-x  2 openvx openvx  4096 Mar 23 22:06 exercise3/
drwxr-xr-x  2 openvx openvx  4096 Mar 23 22:06 exercise4/
drwxr-xr-x  3 openvx openvx  4096 Mar 26 10:29 include/
drwxr-xr-x  2 openvx openvx  4096 Mar 27 19:13 solution_exercise1/
drwxr-xr-x  2 openvx openvx  4096 Mar 23 22:07 solution_exercise2/
drwxr-xr-x  2 openvx openvx  4096 Mar 23 22:07 solution_exercise3/
drwxr-xr-x  2 openvx openvx  4096 Mar 23 22:07 solution_exercise4/
```

Open source Implementation

Source code for the tutorial

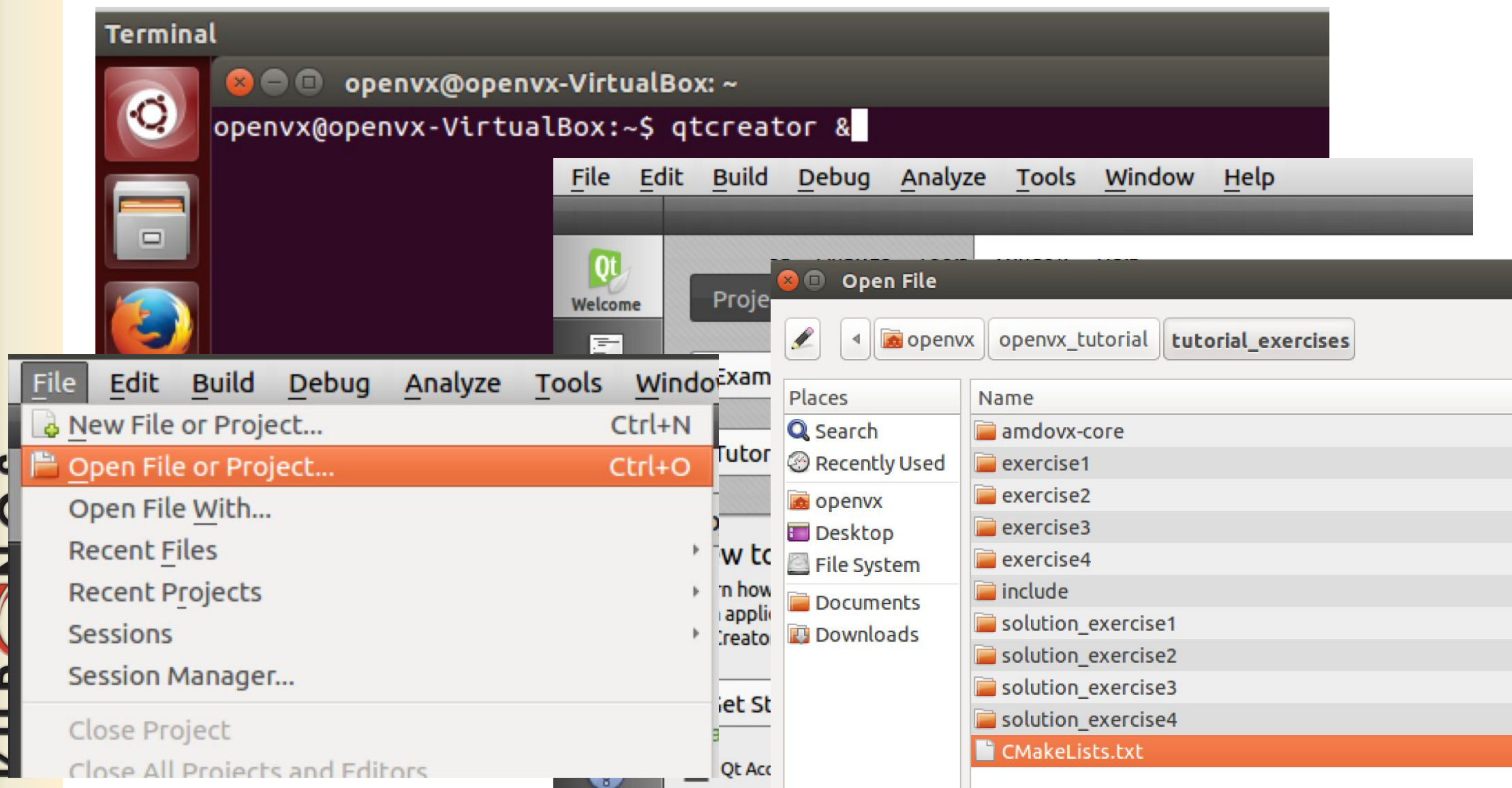
- exercise<n> starting point
- solution_exercise<n> full solution

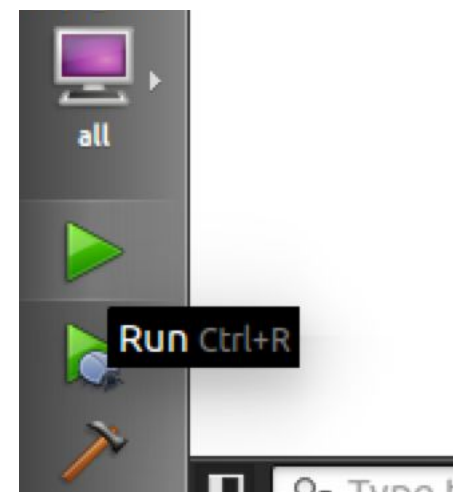
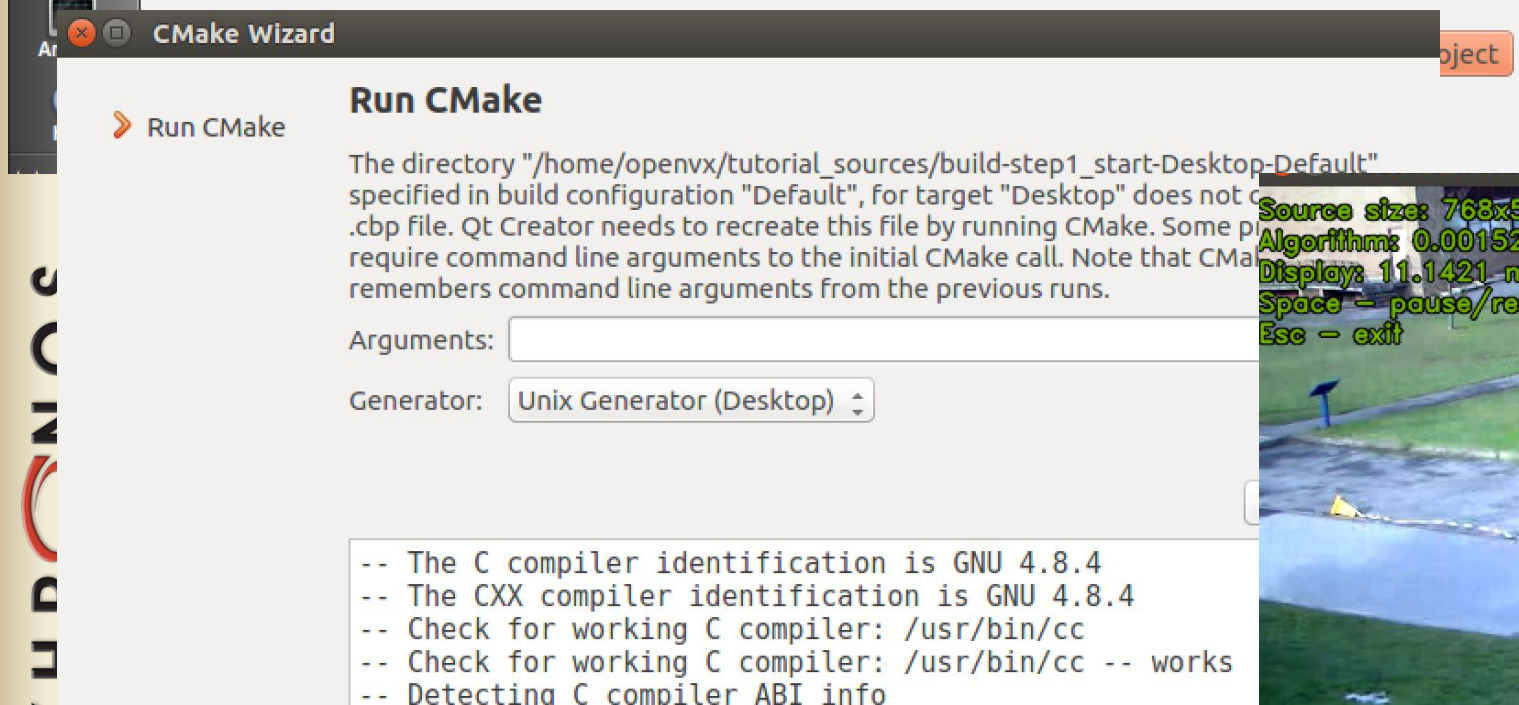
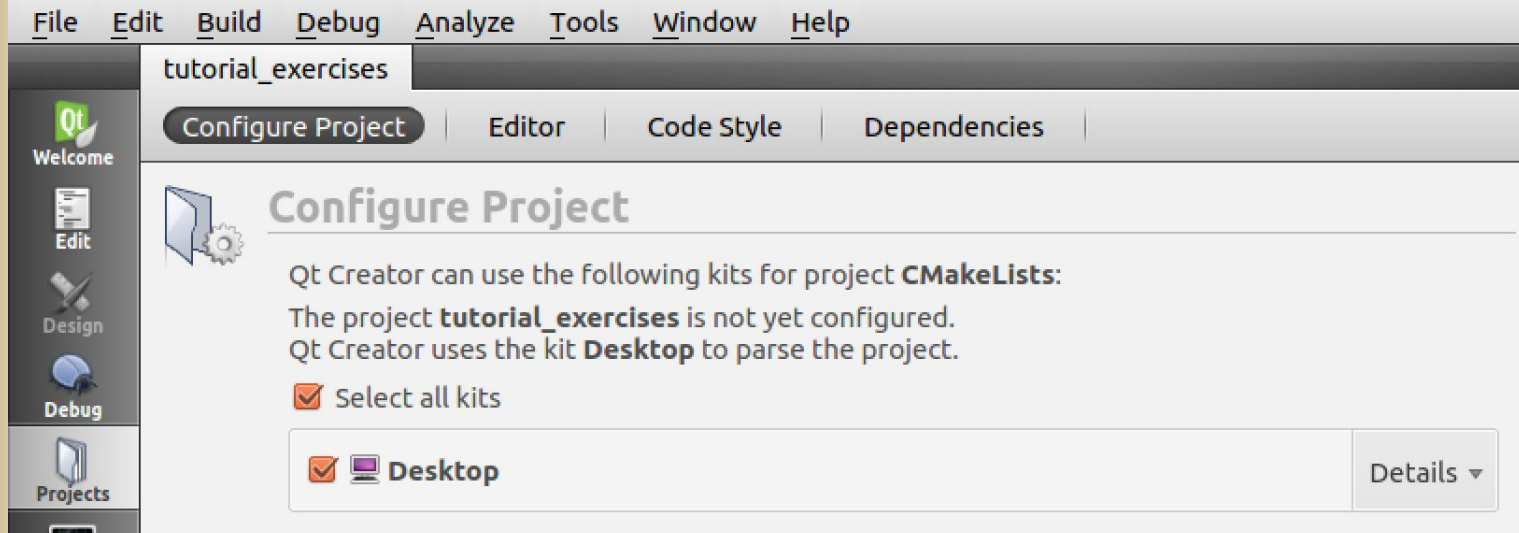


Getting Ready

Using QtCreator IDE

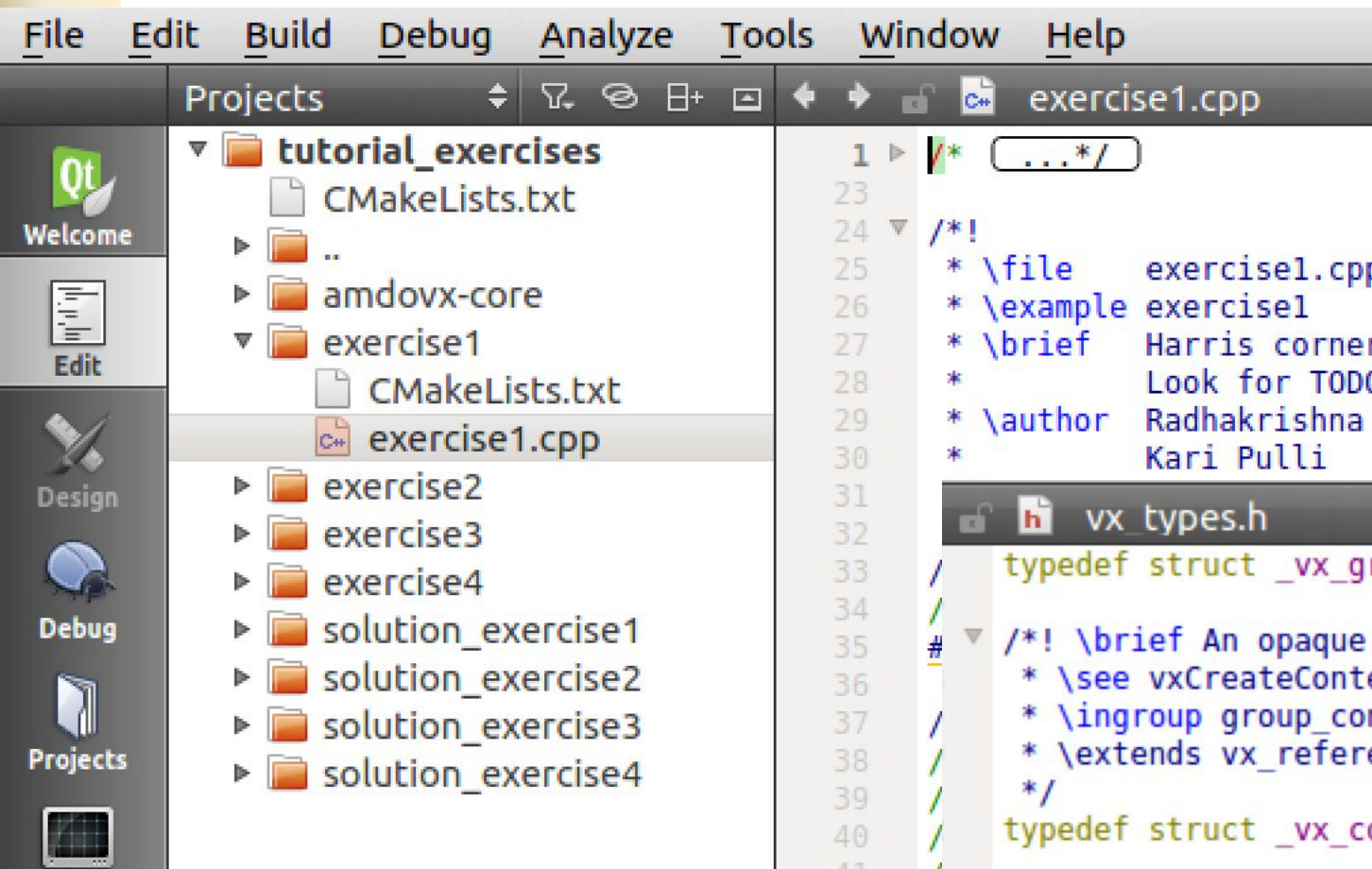
Open a terminal with CTRL + ALT + T





Source size: 768x576
Algorithm: 0.001523 ms / 656599 FPS
Display: 11.1421 ms / 89.7494 FPS
Space - pause/resume
Esc - exit





```
vx_context context = 0: /* ... */
```

```
//#
```

```
#####
```

```
// Create
```

Switch Header/Source

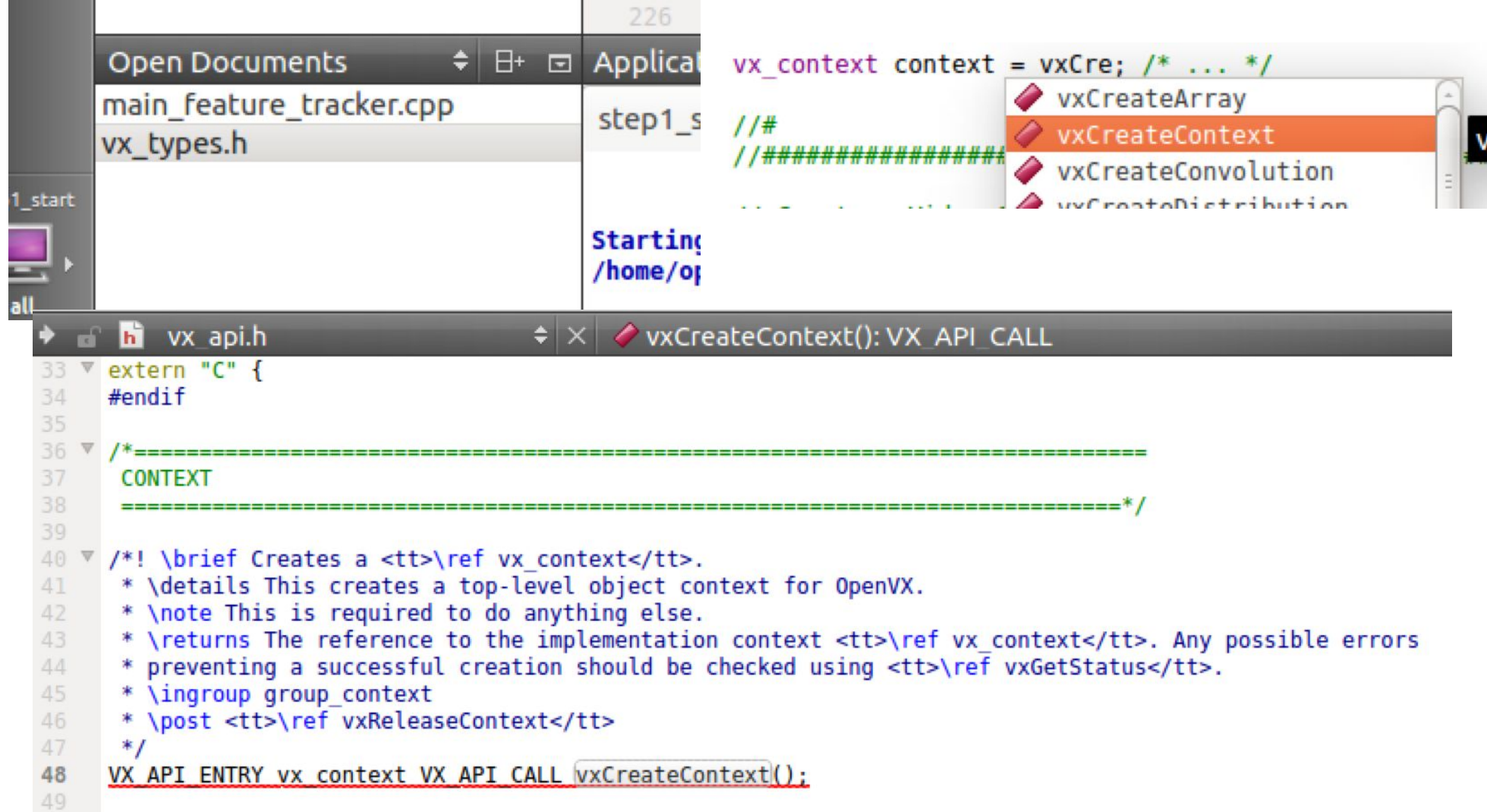
Follow Symbol Under Cursor

Switch Between Function Declaration/Definition

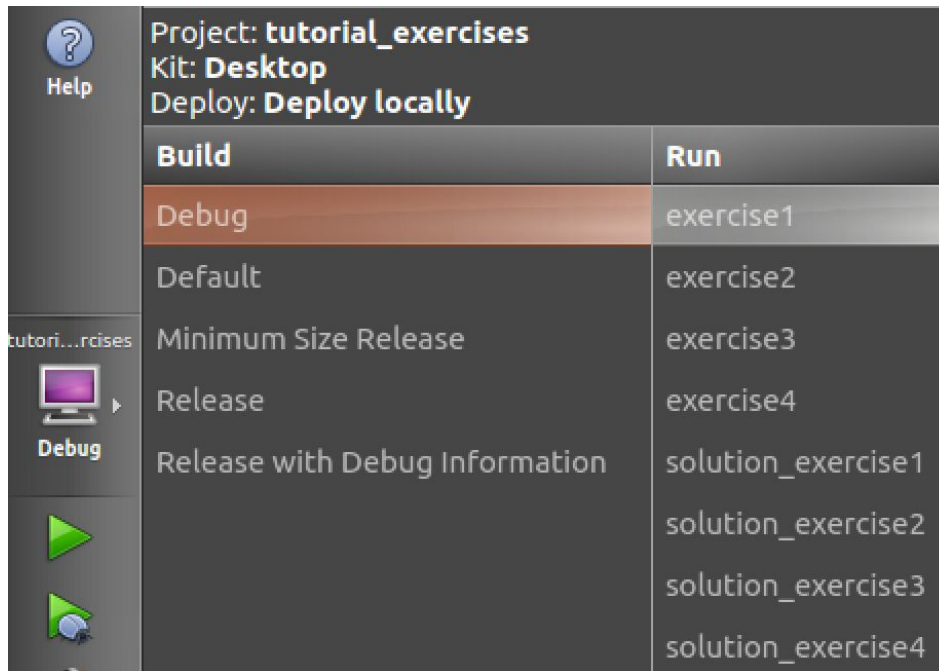
F4

F2

Shift+F2



CTRL-T



```

99 // It defaults to the video sequence in VIDEO_SEQUENCE
100 int main( int argc, char * argv[] )
101 {
102     // Get default video sequence when nothing is spe
103     // instantiate OpenCV GUI module for reading input
104     // the image with OpenVX results.
105     const char * video_sequence = argv[1];
106     CGuiModule gui( video_sequence );
107
108     // Try to grab the first video frame from the sequence
109     // and check if a video frame is available.
110     if( !gui.Grab() )
111     {

```

Run CMake

Refreshing the .cbp file in "/home/openvx/openvx_tutorial/build-tutorial_exercises-Desktop-Debug" for build configuration "Debug" for target "Desktop".

Arguments:

Generator:

Run CMake

